

Amendment Under 37 C.F.R. §1.111
Serial No. 10/046,882
Attorney Docket No. 020044

AMENDMENTS TO THE CLAIMS:

Listing of claims:

This listing of claims replaces all prior versions and listings of claims in the application.

1. (Currently Amended): An Internet printing method ~~for a client to control the printing of a print server via the Internet using the Internet Printing Protocol~~, comprising:
providing a proxy unit on the Internet:
opening a server site of ~~the a~~ print server ~~in a proxy unit on the Internet~~ according to a request from ~~the a~~ client and/or the print server, the server site being opened in the proxy unit;
accessing the server site ~~using the Internet Printing Protocol with by~~ the client; and
~~converting a printing service request of the client using the Internet Printing Protocol~~
protocol into a protocol which allows circumventing the firewall of the print server, and
transferring ~~the converted a~~ printing service request from the client to the print server ~~according to the access~~.

2. (Previously Presented): The Internet printing method according to Claim 1, further comprising:

returning an execution result of the printer server for the printing service request to the proxy unit, and returning the execution result to the client from the proxy unit using the Internet Printing Protocol.

3. (Previously Presented): The Internet printing method according to Claim 1, further comprising:

connecting the proxy unit and the print server according to the connection request from the print server.

4. (Previously Presented): The Internet printing method according to Claim 3, wherein the proxy unit plays the role of a server and the print server plays a role of a client when the proxy unit and the print server are connected, and the proxy unit plays a role of a client and the print server plays the role of a server when the printing service is requested after the connection.

5. (Previously Presented): The Internet printing method according to Claim 1, further comprising:

transmitting a printing command from the client to the print server using a protocol which can circumvent the firewall; and

connecting the proxy unit and the print server according to the connection request from the print server corresponding to the printing command.

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6. (Previously Presented): The Internet printing method according to Claim 1, further comprising:

 a step of transmitting a printing command from the client to the proxy unit using the Internet Printing Protocol;

 transferring the printing command from the proxy unit to the print server using a protocol which can circumvent the firewall; and

 connecting the proxy unit and the print server according to the connection request from the print server corresponding to the transferred printing command.

7. (Previously Presented): The Internet printing method according to Claim 1, further comprising:

 constantly connecting the proxy unit and the print server according to the connection request from the print server.

8. (Currently Amended): An Internet printing system ~~for a client to control the printing for a print server via the Internet using the Internet Printing Protocol~~, comprising:

 the a client that communicates at least by using the Internet Printing Protocol;

 the a print server that is protected by a firewall on the Internet and for executing a printing service request; and

a proxy unit that opens a server site of the print server according to a request from the client and/or the print server, converts ~~the printing service request of the client using the Internet Printing Protocol~~ the Internet Printing Protocol used by the client for sending the printing service request into a protocol which allows circumventing the firewall of the print server at the access of the client to the server site ~~by the Internet Printing Protocol~~, and transfers the request to the print server.

9. (Previously Presented): The Internet printing system according to Claim 8, wherein the print server returns the execution result for the printing service request to the proxy unit and the proxy unit returns the execution result to the client using the Internet Printing Protocol.

10. (Previously Presented): The Internet printing system according to Claim 8, wherein the proxy unit is connected to the print server according to the connection request from the print server.

11. (Previously Presented): The Internet printing system according to Claim 10, wherein the proxy unit plays a role of a server and the print server plays a role of a client when the proxy unit and the print server are connected, and the proxy unit plays a role of a client and the print server plays a role of a server when the printing service is requested after the connection.

12. (Previously Presented): The Internet printing system according to Claim 8, wherein the client transmits a printing command to the print server using a protocol which can circumvent the firewall, and the proxy unit connects with the print server according to the connection request from the print server corresponding to the printing command.

13. (Previously Presented): The Internet printing system according to Claim 8, wherein the client transmits a printing command to the proxy unit using the Internet Printing Protocol, and the proxy unit transfers the printing command to the print server using a protocol which can circumvent the firewall, and connects with the print server according to the connection request from the print server corresponding to the transferred printing command.

14. (Previously Presented): The Internet printing system according to Claim 8, wherein the proxy unit is constantly connected with the print server according to the connection request from the print server.

15. (Currently Amended): A proxy unit ~~for a client to control the printing for a print server via the Internet using the Internet Printing Protocol~~, comprising:
a server site of the print server to be opened according to a request from the client and/or the print server; and

~~an exchanger for converting a printing service request of the client by the Internet Printing Protocol to that converts a protocol used by the client for sending a printing service request into a protocol which allows circumventing the firewall of the print server at the access of the client to the server site by Internet Printing Protocol, and for transferring, and transfers the request to the print server.~~

16. (Previously Presented): The proxy unit according to Claim 15, wherein exchanger receives an execution result of print server for printing service request and returns to the client by the Internet Printing Protocol.

17. (Previously Presented): The proxy unit according to Claim 15, wherein the proxy unit connects with the print server according to the connection request from the print server.

18. (Previously Presented): The proxy unit according to Claim 17, wherein the proxy unit plays a role of a server and the print server plays a role of a client when the proxy unit and the print server are connected, and the proxy unit plays a role of a client and the print server plays a role of a server when the printing service is requested after the connection.

19. (Currently Amended): A printer server ~~for a client to control printing via the Internet using the Internet Printing Protocol~~, comprising:

a network interface ~~unit~~ for communicating; and
a ~~processing-unit~~ processor that requests to a proxy unit installed on the Internet to open a server site of ~~the~~ a print server, ~~receiving and receives~~ a printing service request from the proxy unit where a protocol used for a printing service request of the client ~~by Internet Printing Protocol~~ is converted into a protocol which allows circumventing the firewall of the print server at the access of the client to the server site ~~by the Internet Printing Protocol~~, and executes the printing service request.

20. (Previously Presented): The print server according to Claim 19, wherein the proxy unit plays a role of a server and the print server plays a role of a client when the proxy unit and the print server are connected, and the proxy unit plays the role of a client and the print server plays a role of a server when the printing service is requested after the connection.

21. (New) The Internet printing method according to claim 1, wherein the user accesses the server site by the Internet Printing Protocol, the Internet Printing Protocol is converted to a protocol which allows circumventing the firewall of the print server.

22. (New) The Internet printing method according to claim 1, wherein the protocol which does not allow circumventing a firewall is converted to the protocol which allows circumventing the firewall of the print server at the proxy unit.

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23. (New) The proxy unit according to claim 15, wherein the user accesses the server site by the Internet Printing Protocol, the Internet Printing Protocol is converted to a protocol which allows circumventing the firewall of the print server.

24. (New) The printer server according to claim 19, wherein the user accesses the server site by the Internet Printing Protocol, the Internet Printing Protocol is converted to a protocol which allows circumventing the firewall of the print server.